

We claim:

1. A redundant memory architecture comprising an active memory supporting in-service storage operations and an inactive memory that is synchronized with stored contents of the active memory, wherein stored contents of the inactive memory are defragmented prior to an activity switch which results thenceforth in the inactive memory assuming said in-service storage operations and in the active memory being updated with the stored contents of the inactive memory, the redundant memory architecture further comprising a data structure to maintain correspondence between the respective stored  
10 contents of the active memory and the inactive memory.
2. The redundant memory architecture as claimed in Claim 1, wherein the contents of the inactive memory are defragmented at intervals.
3. The redundant memory architecture as claimed in Claim 2, wherein the contents of the inactive memory are defragmented at periodic intervals.
4. The redundant memory architecture as claimed in Claim 1, wherein the contents of the inactive memory are defragmented upon a predetermined measure of  
20 fragmentation of the active memory being surpassed.
5. The redundant memory architecture as claimed in Claim 2, wherein the contents of the inactive memory are defragmented at intervals based upon a level of usage of the active memory.
6. The redundant memory architecture as claimed in Claim 1, wherein the inactive memory is synchronized with the stored contents of the active memory at intervals.

7. The redundant memory architecture as claimed in Claim 6, wherein the inactive memory is synchronized with the stored contents of the active memory following the stored contents of the active memory being changed.

8. The redundant memory architecture as claimed in Claim 1, wherein the data structure is a cross-reference table.

9. The redundant memory architecture as claimed in Claim 1, wherein prior to the activity switch and immediately following the contents of the inactive memory being  
10 defragmented as aforesaid, the inactive memory is synchronized with the stored contents of the active memory.

10. The redundant memory architecture as claimed in Claim 1, wherein the contents of the active memory are replaced with the contents of the inactive memory once the contents of the inactive memory have been defragmented as aforesaid.

11. The redundant memory architecture as claimed in Claim 1, wherein the active memory and the inactive memory are each partitioned into memory segments.

20 12. The redundant memory architecture as claimed in Claim 4, wherein the active memory and the inactive memory are each partitioned into memory segments.

13. The redundant memory architecture as claimed in Claim 12, wherein the predetermined measure of fragmentation is assessed for partitioned memory segments of the active memory in the aggregate.

14. The redundant memory architecture as claimed in Claim 13, wherein the predetermined measure of fragmentation is assessed for partitioned memory segments of the active memory separately.

15. The redundant memory architecture as claimed in Claim 11, wherein the memory segments of the inactive memory may be adjusted as to their size allocation following the contents of the inactive memory being defragmented as aforesaid.